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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,115	10/19/2001	Ying Luo	A-70229/RMS/DHR	2856

20350 7590 03/22/2006

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EXAMINER

GIBBS, TERRA C

ART UNIT PAPER NUMBER

1635

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/029,115

**Applicant(s)**

LUO ET AL.

**Examiner**

Terra C. Gibbs

**Art Unit**

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on December 12, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 3, 21, and 28 is/are allowed.
- 6) ☒ Claim(s) 16-20,22 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 23 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: sequence search alignment.

### **DETAILED ACTION**

This Office Action is a response to Applicant's Amendment and Remarks filed December 12, 2005.

Claim 18 has been amended. Claims 2, 3, 16-28 are pending.

Claims 2, 3, 16-28 have been examined on the merits.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Information Disclosure Statement***

Applicant's information disclosure statement filed February 2, 2006 is acknowledged. The submission is in compliance with the provisions of 37 CFR §1.97. Accordingly, the Examiner has considered the information disclosure statement, and a signed copy is enclosed herewith.

### ***Claim Rejections - 35 USC § 101***

In the previous Office Action mailed November 15, 2005, claim 18 was rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. **This rejection is withdrawn** in view of Applicant's Amendment to the claims. Specifically, the Examiner is withdrawing this rejection in view of Applicant's Amendment to the claims to recite, "an isolated or cultured host cell".

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It is noted that in the previous Office Action mailed November 15, 2005, claims 16, 22 and 24-26 were indicated as allowable. However, after careful reconsideration of the claims, the following new rejection is made of record:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16-20, 22 and 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Plowman et al. [U.S. Patent No. 6,656,716] ('716).

Claim 16 is drawn to a recombinant nucleic acid, comprising a nucleic acid sequence that encodes a MINK3 protein comprising an amino acid sequence having at least 98% identity to an amino acid selected from SEQ ID NOs: 2, 4, and 6. Claims 17-20 depend from claim 16 and include all the limitations of claim 16 with the further limitations of an expression vector and an isolated or cultured host cell comprising said recombinant nucleic acid and a method of making a MINK3 protein comprising the step of culturing said host cell and further isolating the MINK3 protein. Claim 22 depends from claim 16 and include all the limitations of claim 16 with the further limitation of a recombinant nucleic acid, comprising a nucleic acid sequence that encodes a MINK3

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protein comprising an amino acid sequence having at least 99% identity to an amino acid selected from SEQ ID NOs: 2, 4, and 6. Claims 24-26 depend from claim 16 and include all the limitations of claim 16 with the further limitations wherein the MINK3 protein activates a JNK or ERK protein, or binds a Nck protein.

'716 disclose polypeptide fragments of human protein kinases (see Abstract). Specifically, '716 discloses the amino acid sequence of human ZC3 (SEQ ID NO:15), which shares 99.1% identity to SEQ ID NO:6 of the instant invention (see attached sequence alignment). '716 also discloses the invention features recombinant nucleic acid molecules encoding human ZC3, further comprising a vector to initiate transcription in a host cell (see entire patent, especially at column 10, lines 4-8). '716 also discloses the production of ZC3 from a nucleic acid vector containing ZC3 in which the vector is transfected into cells to produce ZC3 protein (see entire patent, especially at column 19, lines 9-13).

The burden of establishing whether the prior art recombinant nucleic acid has the further function of activating a JNK or ERK protein or bind to a Nck protein under generally any assay conditions falls to Applicant. See MPEP 2112.01, "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709,

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15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433." See also MPEP 2112: "[T]he PTO can require an Applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [her] claimed product." The MPEP at 2112 citing *In re Fitzgerald* 205 USPQ 594, 596, (CCPA 1980), quoting In re Best 195 USPQ 430 as per above. Therefore, it falls to Applicant to determine and provide evidence that the prior art recombinant nucleic acid disclosed by '716 has the further function of "activating a JNK or ERK protein" "or bind a Nck protein" as claimed.

Therefore, '716 anticipates claims 16-20, 22 and 24-26.

### ***Conclusion***

Claims 23 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 3, 21, and 28 are allowable. Claims 2, 3, and 21 are considered to be free of the prior art since the prior art does not teach or fairly suggest a recombinant nucleic acid, comprising a nucleic acid sequence that encodes a MINK3 protein comprising a nucleic acid sequence comprising SEQ ID NOs: 1, 3, and 5, or having at least 99% or 98% identity to a nucleic acid selected from SEQ ID NOs: 1, 3, and 5. Claim 28 is considered to be free of the prior art since the prior art does not teach or

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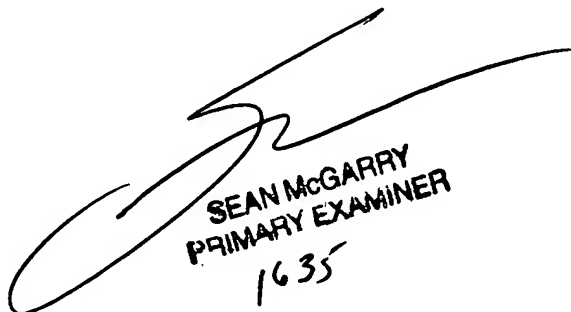
fairly suggest a recombinant nucleic acid comprising a nucleotide sequence that is complementary to a nucleic acid sequence having at least 98% identity to nucleotides 2804-3187 of SEQ ID NO:1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terra C. Gibbs whose telephone number is 571-272-0758. The examiner can normally be reached on 9 am - 5 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tcg  
March 15, 2006



SEAN MCGARRY  
PRIMARY EXAMINER  
1635





Tue Mar 7 06:30:08 2006

us-10-02

Db 322 LRLQENKSNSEALKQQOQLQQOQORDPEAHIKHLLHQRQRRIEBQKEERRRVBEEQORRE 381  
Qy 361 REQRKLOEKEQORRLEDMQALRREERROAEREQ----- 394  
Db 382 REQRKLOEKEQORRLEDMQALRREERROAEREQEIYIRHRLBEEQORLEILQQQLLQEQ 441  
Qy 395 ---EYKRKQLEEQORQSERLQROLQOEHAHLKSLQQOQQOQLOKQOQQOQLLPGRDKPLYH 451  
Db 442 LLELYKRKQLEEQORQSERLQROLQOEHAHLKSLQQOQQOQLOKQOQQOQLLPGRDKPLYH 501  
Qy 452 YGRGMNPADKPAWAREVEERTRMNKQNSPLAKSKPGSTGPEPPIQASPGPPGPLSQT 511  
Db 502 YGRGMNPADKPAWAREVEERTRMNKQNSPLAKSKPGSTGPEPPIQASPGPPGPLSQT 561  
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Db 562 PMQRPVEPOEGPHKSLVAHRVPLKPYAAPVPRSQSLQDQPTRNLAAFPASHDPDPAIPAP 621  
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Db 682 SRPAQAVRARPRNSAWQIYLORRAERGTPKPPGPPAQQPPGNASSNPDLRSDPGWER 741  
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Db 862 VHDVEEITGTQPPYGGGTMMVQRTPEEERNLLHADSNGYTNPDPVQPSHSPSTENSGQS 921  
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Db 922 PPSKDGSGDYQSRGLVKAPGKSSFTMFVDLGIYQPGSGDSIPITALVGGEGTRLDQLQY 981  
Qy 932 DVRKGSVVNVNPTNTRAHSETPEIRKYKRFNSEILCAALWGVNLLVGTENGLMLLDRSG 991  
Db 982 DVRKGSVVNVNPTNTRAHSETPEIRKYKRFNSEILCAALWGVNLLVGTENGLMLLDRSG 1041  
Qy 992 QGKVVYGLIGRRRFQOMDVLEGLNLLITISGKRNLRVYYLSWLRNKILHNDPEVEKKQGW 1051  
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